VOL. 18, NO. 4 APRIL-JUNE, 1969

Inventory

A QUARTERLY JOURNAL ON ALCOHOL AND ALCOHOLISM

PUBLISHED BY THE N. C. DEPARTMENT OF MENTAL HEALTH

TREATMENT

REHABILITATION

EDUCATION

PREVENTION

N. C. ALCOHOLIC REHABILITATION CENTER

A.R.C. at Butner

A.R.C. at Black Mountain

About the Centers . . .

The plans are to have four A.R.C.'s. Two are operating now, a third is expected to open soon, and a fourth, hopefully, will open by the end of July. The A.R.C.'s are in-residence treatment facilities operated by the Department of Mental Health—one in each of its regions. At the present time, the following policies will apply generally to the A.R.C.'s. However, they will be reviewed after the centers are well operating and changes may be made then.

A.R.C. Treatment Methods . . .

Treatment is by psychotherapy and consists of group discussions led by the professional staff, educational films, individual consultations with staff members, vocational guidance, recreation, rest, proper food and prescribed medications.

Length of Stay . . .

The basic treatment program is based on a 28-day schedule. The patient may remain for a longer period if, in the opinion of the staff, it will be of further therapeutic benefit to him. No applications for less than 28 days are accepted.

Admission Requirements . . .

1. Admission is entirely on a voluntary basis and a person cannot be accepted on court order or legal commitment. The Center cannot accept persons who have any court hearing or legal action pending which would interfere with or curtail their treatment program.

2. An appointment for admission is obtained by written or telephone application to the Admitting Officer. All appointments are confirmed by mail. They should be made through a physician or other professional person in the prospective patient's community.

3. Patients are expected to be sober on admission, and the Center will not admit a person if intoxication impairs his functioning. The Center does not have nursing or hospital facilities to treat acute intoxication.

4. A written report of a recent physical examination by a licensed physician must be presented upon admission. The patient's physical and mental condition must be good enough to enable him to participate in the treatment program, walk up and down stairs, etc. The Center does not have hospital beds or nursing staff for the treatment of serious physical or mental disorders.

5. A fee of $7.00 per day is charged for the four weeks of treatment. This may be paid by cash or check at the time of admission, or by an agreement signed by the patient at the time of admission — promising to pay the full sum at some time after discharge.

If a person is indigent he may obtain a letter stating this fact from his local county welfare agency, and upon presentation of this letter at the time of admission the request for payment will be deferred.

The Center does not refuse to admit any person because of lack of money, but feels that patients having treatment should take responsibility for the cost if they are able to pay all or part at the time of admission or later. Each case is handled individually.

6. A social history, compiled by a trained social worker in the local welfare or family service agency or other professional organization is required. Arrangements for the history should be made early enough so that it reaches the Center within a week following admission.

Admitting Days . . .

Patients are admitted to the Center five days a week, Monday through Friday, between 9:00 a.m. and 12:00 noon and 1:00 p.m. and 5:00 p.m. by appointments as described above.

The A.R.C.'s

For an appointment contact the Admitting Office at:

A.R.C. at Black Mountain (Just off old Highway 70 east of Western N. C. Sanatorium), serving the Western Region—Tel: (704) 669-6481.

A.R.C. at Butner (12 miles north of Durham off Highway 15), serving all other regions—Tel: (919) 985-6541.

N. C. DEPARTMENT OF MENTAL HEALTH

NORBERT L. KELLY, Ph.D.
Director
DIVISION OF EDUCATION

R. J. BLACKLEY, M.D.
Director
DIVISION OF ALCOHOLISM

GEORGE H. ADAMS
Director
DIVISION OF INFORMATION AND PUBLIC RELATIONS

INVENTORY

APRIL-JUNE, 1969

VOLUME 18 NUMBER 4

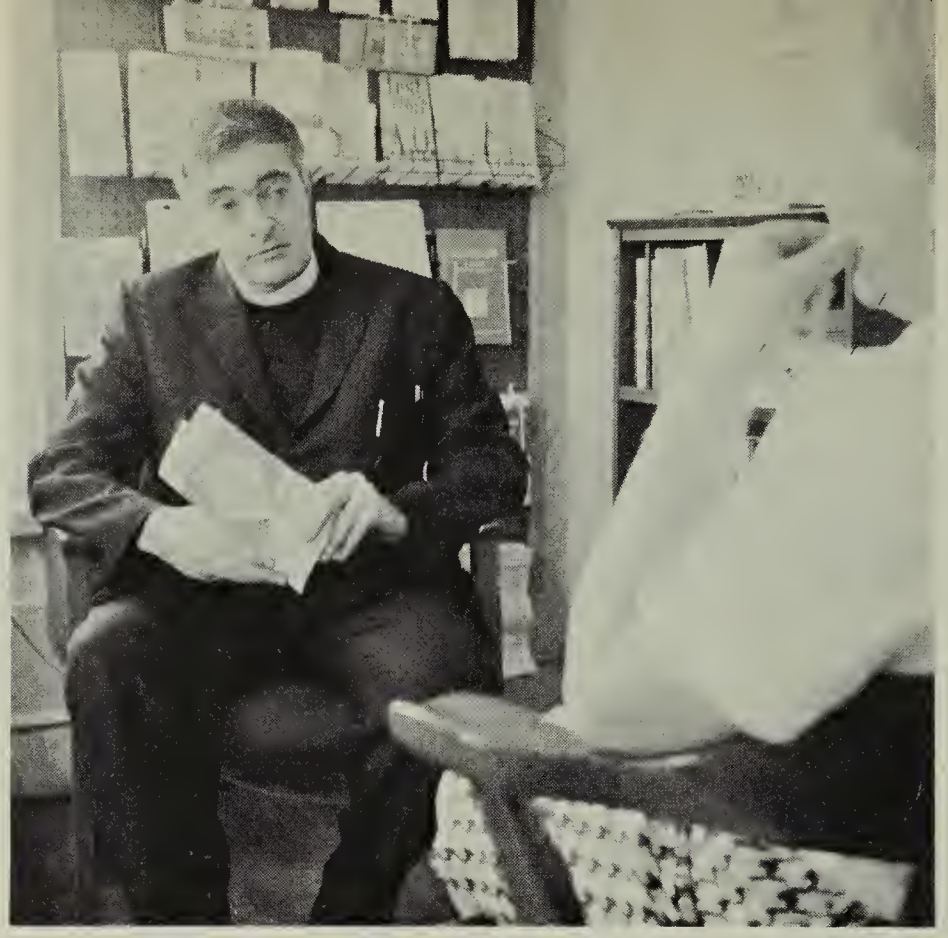
RALEIGH, N. C.

An educational Journal on Alcohol and Alcoholism. Published quarterly by the N. C. Department of Mental Health created by Section 122-1 of the General Statutes of North Carolina. Former Section 122-1 was redesignated by Session Laws 1963 c. 1166, s. 2, as Section 122-7. Section 3 of the 1963 act added present Section 122-1. Offices are located at 441 North Harrington Street, Raleigh, N. C. 27603.

This journal is printed as a public information service. Persons desiring a place on the free mailing list must send in a written request, with the exception that *new* requests from *individuals* residing outside North Carolina can no longer be accepted. The views expressed in the articles published are those of the authors and not necessarily those of *Inventory*. Manuscripts are invited with the understanding that no fees can be paid.

Write: INVENTORY, P. O. Box 9494, Raleigh, North Carolina 27603.

SECOND-CLASS POSTAGE PAID AT RALEIGH, N. C. 27602



Counseling is provided for the problem drinker and his family. Above, a woman is being counseled.

ALCOHOL and CHURCH PROGRAMS

A questionnaire revealed that community leaders believed the number one problem to be providing help for victims of alcoholism.

LEE County, North Carolina, had so much going for it from the start that it seems almost inevitable it would have the model community alcohol concern program it has.

For one thing it badly needed a program. The largely rural and agricultural area, with its county seat in Sanford, was rapidly becoming urbanized and industrialized. Alcoholism was increasing sharply, as well as various other alcohol problems—for example, bootlegging, drunken driving, teen-age drinking, drinking-related job absenteeism.

The Mental Health Clinic was proposing to establish a comprehensive area mental health center. It asked several hundred community leaders to evaluate local needs and to report on a questionnaire. When the results were tabulated, the clinic director announced: "Community leaders believe our number one problem is to provide help for the victims of alco-

This article, Case No. 3, is reprinted by permission from the publication, "Alcohol and Church Programs (21 Case Studies of Community, State and National Programs)," published by the North Conway Institute. The illustrative pictures were provided by Rev. Middleton Raynal, director of the Lee County program described in the article. The N.C.I., an "interfaith association for education on alcohol problems," will hold its summer conference June 23-26, 1969 at Stonehurst Manor in North Conway, New Hampshire.

The board of directors of the Lee County Council on Alcoholism meets every two weeks for lunch at the hospital cafeteria.

holism."

There was an Alcohol Beverage Control Board which accepted responsibility for more than selling alcoholic beverages and closing down bootlegging operations. There was a physician who was frustrated by his individual efforts to "cure" alcoholics. There was a congregation which was greatly concerned with its high percentage of problem drinkers. There were local organizations, institutions, and agencies which seemed to be arriving separately at an identical conclusion—that a coordinated area-wide program was becoming necessary. There was a strong A.A. program, its individual members ready to support any positive community undertaking. And there was a minister, blessed by a congregation of rare understanding, who for many years had felt a special call to work with problem drinkers.

The frustrated doctor and the concerned minister finally got together for serious talk. The occasion was brought about by the doctor's seeing a patient who had recently been released from the Alcoholism Unit of a state mental hospital. Out only a few weeks, the patient was drinking again. But the doctor and the minister discussed more than one alcoholic's immediate need. They were vitally concerned about the long-range needs of the whole community.

They decided to call for reinforcements. The physician, Dr. Paul O. Howard, called together a number of responsible leaders from local government, the churches, medicine, law, the media, industry, welfare, and other interested professions. The group planned for almost a year. During this time the minister—the Rev. H. Middleton Raynal — continued his work with problem drinkers, and his education in alcohol problems (at Rutgers Summer School of Alcohol Studies and at the 13th Annual North Conway, N. H., Conference).

What kind of program did the county need?

"We considered just about everything," the Rev. Middleton Raynal says. "We studied the establishment of a halfway house, a vocational rehabilitation center, a multi-county information and education center, a new program of training for those in the care-giving professions, an industrial program in which employers would require problem drinkers to take Antabuse daily at the start of work!

"Every suggestion received full consideration. At the end, we decid-

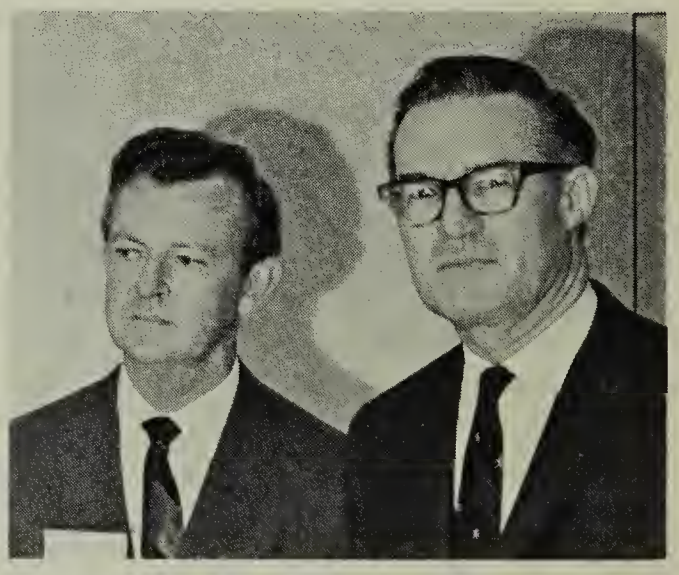
(Continued on page 6)

NEWS BRIEFS: The Alcoholic Rehabilitation Center at Greenville opened June 30. . . Funds to establish an ARC at Dorothea Dix Hospital for the South Central Region were appropriated by the 1969 General Assembly.

RALEIGH, N. C.: Dr. R. J. Blackley in April was appointed deputy commissioner on alcoholism for the N. C. Department of Mental Health. At the time of his appointment he was serving as director of the Division of Alcoholism and will continue to serve in that capacity. The new position, approved by the board of Mental Health, was created to give alcoholism equal emphasis and visibility with the other program areas of the department—mental health and mental retardation—according to Commissioner Eugene A. Hargrove, M.D. "The move is also in recognition of the seriousness of the alcoholism problem in our state," he said.

Dr. Blackley, a native Tar Heel from Hamlet, earned his B.S. degree in medicine from the University of North Carolina in 1950 and his M.D. degree from McGill University in 1953. Following internship at Germantown Hospital in Philadelphia, he served his residency at N. C. Memorial Hospital at Chapel Hill. He is a member of the Medical Society of North Carolina, the North Carolina Neuropsychiatric Association, and a member-at-large of the Institute of Rehabilitation Services. He is also serving on the board of directors of the Mental Health Training Institute.

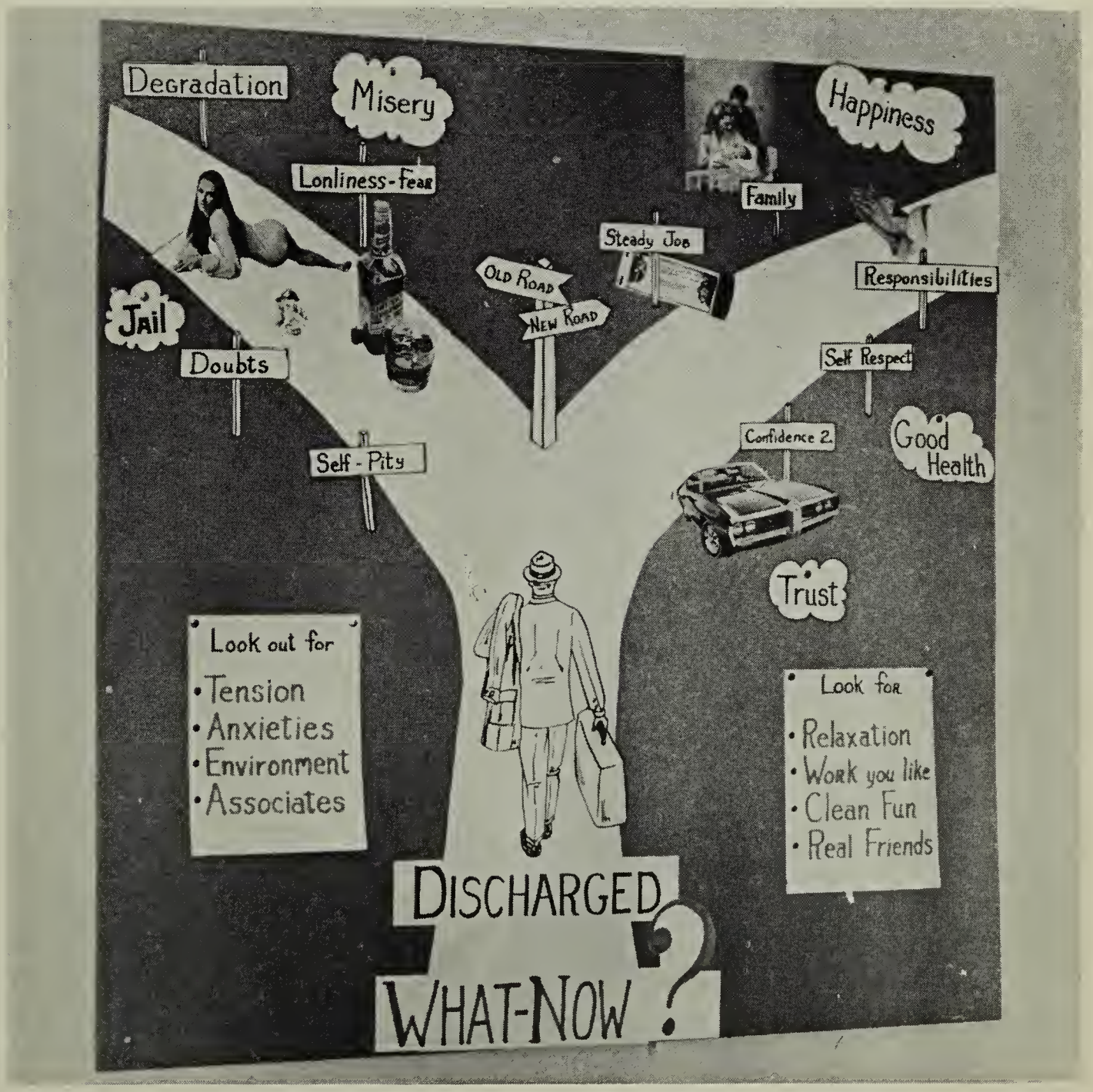
Other positions Dr. Blackley has held with the department are medical director of the Alcoholic Rehabilitation Center at Butner, assistant superintendent of John Umstead Hospital, acting superintendent of Murdoch Center and director of the Davidson County Mental Health Clinic.



Dr. R. J. Blackley (left), new deputy commissioner on alcoholism for the Department of Mental Health, is shown here with Commissioner Eugene A. Hargrove, M.D. who announced his appointment in April. Dr. Blackley also is director of the Division of Alcoholism.

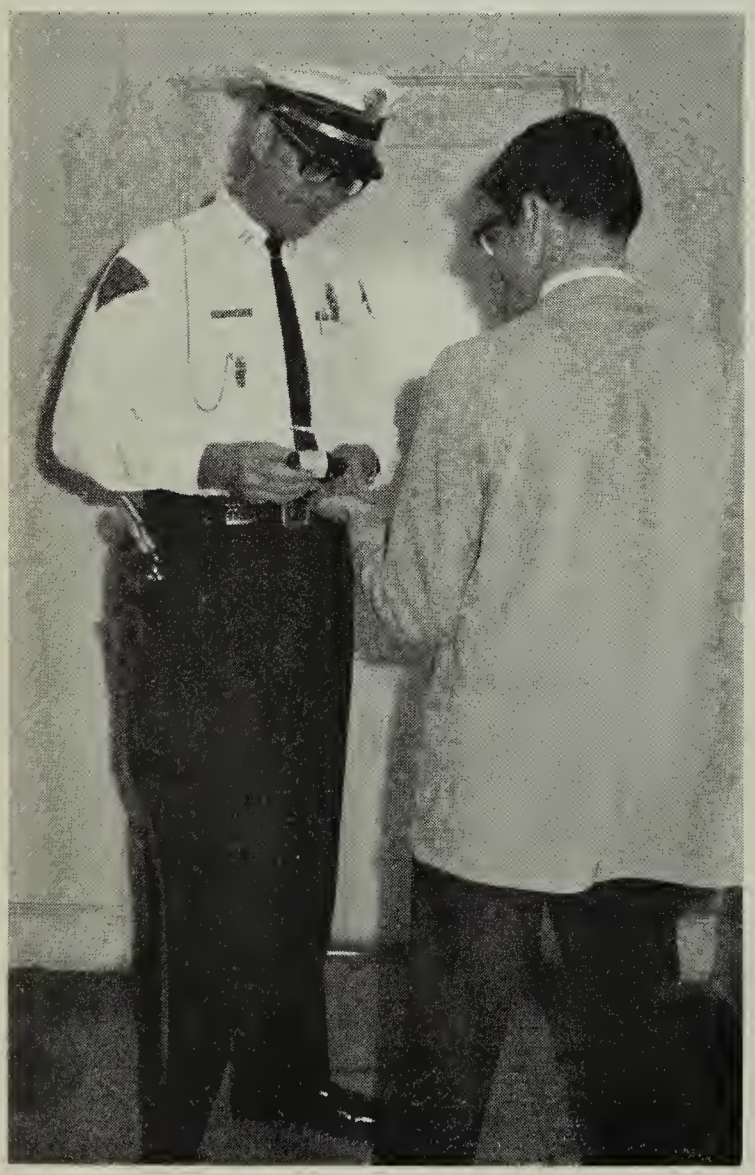
NORTH DAKOTA REPEALS PUBLIC INTOXICATION LAW: North Dakota's 1969 Legislative Assembly repealed the long standing law declaring public intoxication a misdemeanor subject to arrest and made specific provisions for handling intoxicated persons. The new law authorizes a peace officer to take an intoxicated person into protective custody, to his home, to a hospital, or to a jail under adequate surveillance. In jail he may be held without charge up to twenty-four hours. In a hospital he may be held up to seventy-two hours by the physician in charge. The bill does not rule out arrest for disorderly conduct, disturbing the peace, or any other crime committed by the intoxicated person. It simply provides that he can be taken without criminal charge to the place where in the judgment of the peace officer he can be most properly cared for. (From **Monitor,** published by the North Dakota Commission on Alcoholism.)

RALEIGH, N. C.: "There's a bulletin board, do what you want with it," Mrs. Emogene Berry, unit nurse director on the Alcoholism Unit at Dorothea Dix Hospital, said to one of her patients. The poster-type "bulletin board" (below) became the core of many discussions at meetings of the patients. Interestingly, it asks the big question facing the unit's treatment and rehabilitation program, "Discharged. What Now?" The answer lies in community resources.



ed to consolidate existing services and to expand these in certain ways. We saw the need for interdisciplinary, ecumenical action in achieving this. We had learned much, beginning a year earlier, when we had tried to find a way to work with potential suicides."

(A Suicide Prevention Center had been established in cooperation with the Mental Health Clinic. Under the leadership of the clinic staff, a group of ministers had studied counseling of the disturbed and crisis intervention. A special service was begun, with appropriate public announcements, with 24-hour telephone service—the clinic by day and one of the minister-volunteers by night. Whether this or other factors were responsible, the suicide rate of Lee County, which had been one of the highest in the South, has begun to decrease. Through the service, the first such in North Carolina, local and state mental health officials had come to respect the dedication and competence of the group of clergymen.)



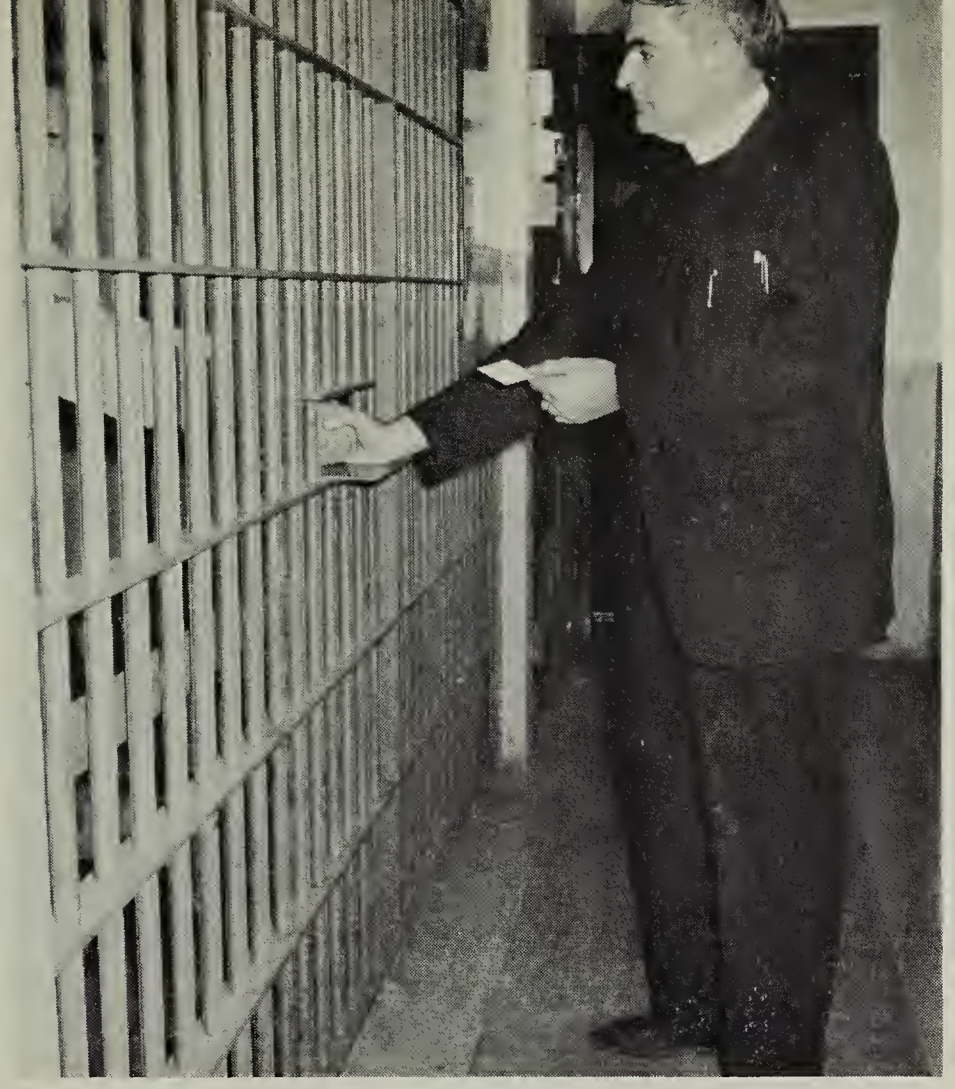
A Sanford Police Department captain gives an antabuse pill to a former "revolving door" alcoholic who volunteered for this treatment.

With the assistance of Dr. Mayberry, the clinic director, the community leaders prepared a program proposal which was submitted to the Alcoholism Division of the North Carolina Department of Mental Health. The department made a grant of $6,000 for the period, January 1 - June 30, 1968, for an experiment with the development of a model program for a small county.

The Lee County Council on Alcoholsm came into existence. It began and continues with an extraordinary board of directors—more than fifty members, representing every concerned profession and public and private alcohol-care group in the area. Included are six doctors, nurses, the police chief of Sanford, the county sheriff, the county commissioners, the superior court judge, the director of the welfare department, city aldermen, three ministers, the local hospital administration, members of the A.B.C. Board, and leaders of business and industry.

Funds were available only for a part-time staff. The Rev. M. Raynal was asked to serve as director. He took up an unusual proposal with his congregation at Morningside Presbyterian Church—that he give half of his time to the church and the rest to the new council. "The congregation saw this as a way to make a unique contribution to the community," he declares. "They agreed enthusiastically. The authorities of our presbytery also gave their warm approval."

Mr. Raynal serves as director and counselor, with a part-time secretary,



The counselor makes regular visits to the jail. Here he offers an alcoholic offender assistance upon his release.

an on-call physician who is medical consultant, and a psychiatrist who is available a half-day weekly.

The council offers counseling for the problem drinker and his family members. It works with local physicians in the treatment and recovery of chronic alcoholics. The counselor makes weekend trips to the jail for contact with those arrested for public drunkenness or drunken driving. He visits regularly with alcoholic patients from the county who are at state hospitals, and offers support and service when they are released. He conducts a public information program which includes keeping local news media informed, giving numerous public talks, and conducting special educational programs (among youth groups in the churches and the public schools).

"A special effort is particularly necessary," the clergyman declares, "to pass along information to our board. Locally, we must also understand the state and the national alcohol picture. I'm indebted for what I get from North Conway Institute. NCI was a major factor in helping to start our program—because it shared with us the richness of its experience."

The council has a budget of $22,000.00 for its fiscal year beginning July 1, 1968. The local A.B.C. Board has given $5,000, the U. S. Presbyterian Church, $2,500, and local organizations, clubs, and individuals another $3,500. The state mental health program is matching this with another $11,000.00.

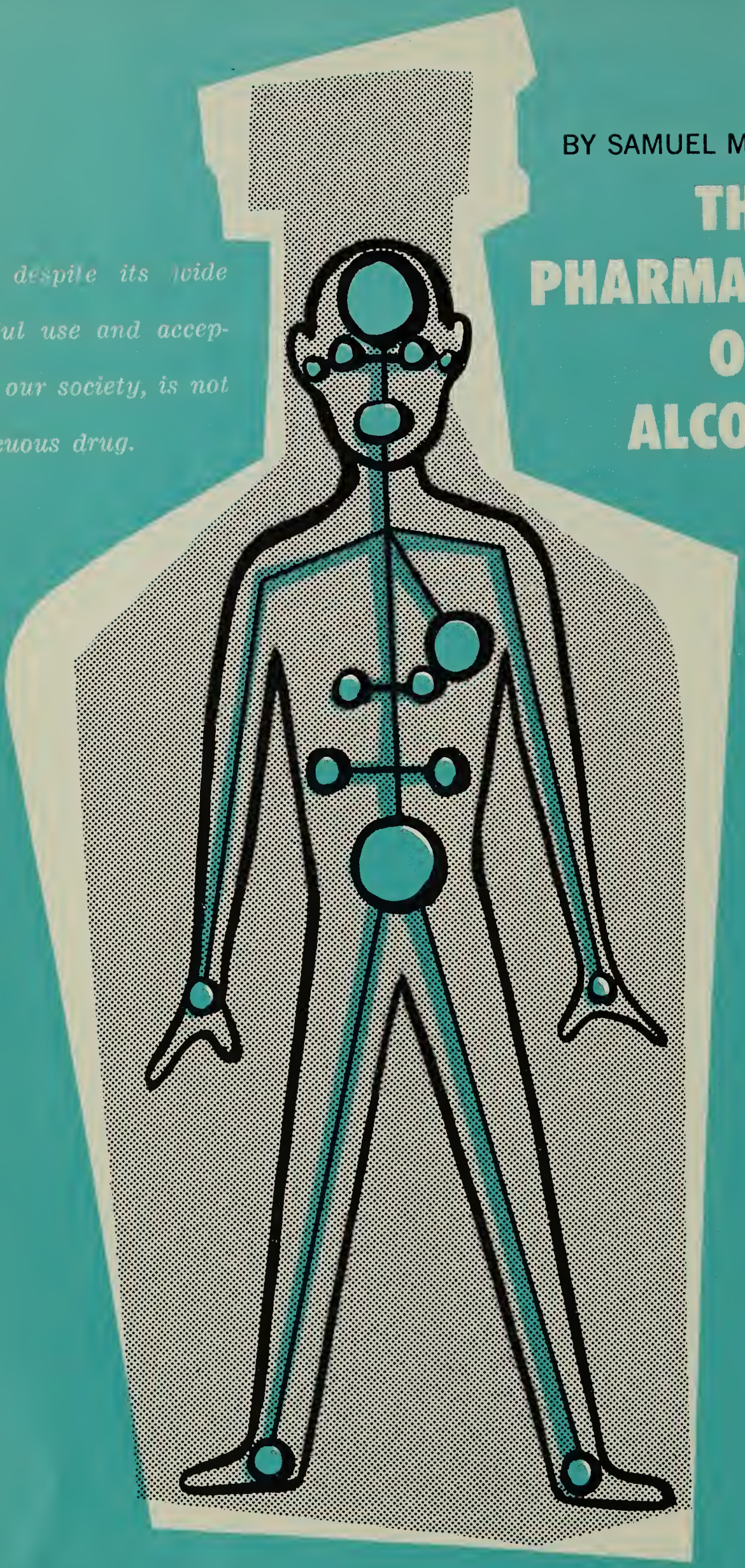
How does someone like Middleton Raynal get involved in working with problem drinkers? Perhaps it's hard to say. But one longtime associate tells this story.

"I asked the preacher how come he could keep on going messing around with me when everybody else gave up. He looked me in the eye and said, 'When the good Lord stops messing around with me, maybe I'll stop messing around with you.' "

BY SAMUEL MALLOV, PH.D.

THE PHARMACOLOGY OF ALCOHOL

Alcohol, despite its wide and joyful use and acceptance in our society, is not an innocuous drug.



CENTRAL Nervous System. The most profound pharmacological effect of alcohol in the body is on the central nervous system, where it acts as a depressant. The effect varies according to the dose, and therefore to the concentration of alcohol in the central nervous system, causing slight depression, then sedation, hypnosis, anesthesia, coma and death as the concentration increases. It also causes analgesia and euphoria. It has been determined that low concentrations first affect the reticular activating system in the brain which, in turn, influences other areas. This system is an alerting and integrating one. Higher concentrations of alcohol, then, presumably affect the cortex directly and deeper areas within the brain until, finally, the medulla becomes involved. When death occurs, it is most often due to an effect on the medulla causing respiratory failure.

The layman is often of the opinion that alcohol is a stimulant. He may observe signs such as excitement, hyperactivity, verbosity, etc. which he interprets as being due to stimulation of the brain. The fact is that such behavior is due to depression of cortical inhibitory centers and not to any direct stimulatory effect. He also observes that in collapse brandy or whiskey is sometimes administered as a stimulant. These substances exert a temporary stimulatory effect indirectly, due to irritation by the alcohol of the membranes of the mouth, throat and stomach which initiate reflexes that promote transient stimulation of the respiratory and vasomotor centers. However, after this temporary stimulation, alcohol exerts its usual depressant activity when it is absorbed—which may add to the difficulty of the situation.

It is not clear how alcohol acts biochemically to produce its depressant or intoxicating effect on the brain. There have been suggestions that it depresses cerebral respiration and that it affects conduction of impulses along nerves as a consequence of certain actions on the permeabilities of the membranes of nerve cells, but none of the laboratory observations serve as adequate explanations yet of the effects of small quantities of alcohol on the living brain. Alcohol is only one of the many agents, such as the hypnotics and anesthetics, whose mechanisms of action we do not yet fully understand.

Certain behavioral changes have been observed in man and in animals in association with increases in the quantities of alcohol present in the body as determined by measurements of the concentration of alcohol in the bloodstream. In man it has been shown that even low concentrations of alcohol affect central nervous system functions. Thus blood alcohol concentrations of .05 to .10 per cent influence so-called "higher" mental processes such as memory, insight, judgment, discrimation and concentration. Due to depression of cortical inhibition there is less self-criticism and behavior becomes less controlled and less inhibited. Low concentrations of alcohol also affect the speed and accuracy of reflexes such as those involved in typewrit-

Editor's Note: This article concludes Dr. Mallov's 1968 John W. Umstead Distinguished Lecture. The first part, published in the Jan.-March, 1969 issue of *Inventory,* covered the action of the body on alcohol or, to say it another way, the "Metabolism of Alcohol." In the final part, Dr. Mallov considers what alcohol does to the body or, to say it another way, the "Pharmacological and Pathological Effects of Alcohol." Dr. Mallov is a professor of pharmacology with the Department of Pharmacology, State University of New York, Upstate Medical Center, Syracuse, New York.

ing, driving a car or shooting.

With larger doses of alcohol effects on the sensory and motor areas of the cortex are seen. Thus, one begins to observe slurred speech, staggering gait, etc. Intoxication is frequently seen when blood levels of alcohol are 0.15 per cent. Most individuals are drunk at levels of 0.20 per cent, while blood alcohol concentrations of 0.30 per cent are usually accompanied by severe intoxication. At levels of 0.40 to 0.50 per cent a dangerous depression of respiration and coma may occur, while lethal levels are those over 0.50 per cent. Lethal levels of alcohol may be much lower if a person has taken barbiturates, tranquilizers or other nervous system depressants in addition to alcohol.

Some general figures may be given to indicate the quantities of alcohol or liquor that have to be ingested in order to achieve various blood alcohol levels. Thus, two ounces of whiskey or two bottles of beer will allow maximum blood alcohol levels of about .05 per cent to be attained. Four ounces of whiskey or four bottles of beer will produce maximum levels of about .10 per cent, while six ounces of whiskey or six bottles of beer will induce blood levels of .15 per cent.

It is a common observation that chronic alcoholics are often oriented after imbibing quantities of liquor that would cause extreme intoxication if ingested by abstainers. This development of tolerance to alcohol on continued use is not well understood in terms of mechanisms. Many investigations have been carried out in this area and, in general, it has not been possible to find in either animals or men who chronically consume large quantities of alcohol any decreased rate of alcohol absorption, altered alcohol distribution, increased rate of alcohol excretion, increased rate of alcohol oxidation, and so on. A few recent experiments have suggested that there may, after all, be alteration in alcohol metabolism developing in chronic alcoholics, but most people feel that the adaptation to the presence of alcohol occurs in the brain; that is, the brain cells, in some manner, become accustomed to working more normally in an environment of alcohol.

The phenomenon of addiction also occurs in the case of alcoholism, although perhaps the incidence and severity of such addiction may be somewhat less than in the case of narcotics. Addiction to alcohol, as to other agents, involves both psychological and physiological components. A psychological dependence on alcohol is developed, with a strong craving for it when it is absent. Physiological dependence also evolves, and withdrawal symptoms, such as the following, occur in the absence of alcohol: anxiety, weakness, anorexia, nausea, vomiting, perspiration, tremors, hallucinations and convulsions.

I am not going into the question of why some people become chronic alcoholics. This is not my area of competence. And, as far as I know, there is neither a clear cut answer nor general agreement among experts in this field. There is a general tenor of belief that alcohol is a tension - reducing, anxiety - diminishing agent and that some people begin to depend on it to resolve their difficulties due to environmental factors or inner conflicts. I do not think we know why some people become chronic alcoholics while others, with similar problems in life, do not. No one has been able to pinpoint a bio-

both psychological and physiological components.

chemical basis for predisposition to alcoholism, although such a basis may very well exist.

As a pharmacologist, I would like to mention some drugs useful in the treatment of nervous system disorders resulting from acute and chronic alcohol intoxication. The intake of oxygen, in the form of air or otherwise, is probably the best treatment for severe, acute alcohol intoxication. The aim in treating a severely intoxicated individual is to keep him breathing and alive. If respiration can be maintained, artificially if necessary, and the person's liver is in any sort of reasonable shape, the body itself will eventually burn off all the alcohol, as already indicated. In such severely depressed persons central nervous stimulants such as caffeine, picrotoxin, pentylenetetrazole and amphetamine are sometimes administered. The actions of these drugs are short, however, compared with the activity of alcohol, and repeated administration may be necessary.

An intoxicated person may be in a state of excitement due to depression of cortical inhibition. To calm such a person, sedatives such as the barbiturates, or paraldehyde, have been used. The tranquilizers are coming into vogue for this purpose. The problem of treating such an individual is tricky, however, because he is essentially already in a depressed state due to the alcohol—despite his aggressive and violent behavior —and the administration of an additional depressant drug may bring him into a state of deep depression or coma.

The withdrawal symptoms shown by the chronic alcoholic deprived of alcohol, already mentioned, may also be alleviated by the administration of central nervous system depressants such as barbiturates and by tranquilizers. The symptoms of restlessness, agitation and convulsions observed are well known to alcoholics, and are described in their lingo as "the jitters, the shakes, and rum fits."

Some people believe that the phenomenon of delirium tremens experienced by many chronic alcoholics is also a withdrawal-symptom syndrone. It often occurs after partial or complete abstinence from alcohol. The person exhibiting delirium tremens suffers with restlessness, insomnia, tremors, agitation, convulsions and terrifying hallucinations. He may go on for days without rest, food or water and become malnourished, dehydrated and exhausted. The control of this type of agitation is also accomplished with sedatives, hypnotics and tranquilizers. The latter permit the patient to be calmed, to sleep and to be awakened for administration of food and fluids.

Another problem of the chronic alcoholic to be considered—which can involve the use of drug therapy —is that of the individual who has an ardent desire to break the alcohol habit and who seeks help in doing so. There are several avenues of assistance; these include psychiatric treatment, religious appeal, Alcoholics Anonymous and aversion therapy.

I would like to say a few words about aversion only since drugs may be used in this instance. One of the drugs employed by physicians is disulfiram, or Antabuse. Taken alone, disulfiram causes few or no untoward effects in most people. If, how-

(Continued on page 13)

Useful in Health Classes

I am a health and physical education teacher and feel that *Inventory* would be of use in my health classes. Please put me on your mailing list.

Georgia Roberson
Concord, N. C.

Ex-Patient Writes

I would like to be put on your mailing list for *Inventory* as I was just recently discharged from Dorothea Dix Hospital. Thank you.

Anonymous
Laurinburg, N. C.

Counsels Alcoholics

Will you please place me on your mailing list for *Inventory?* I am in the process of collecting material for a file to be used with counseling alcoholics.

Rev. B. J. Willett
Pittsboro, N. C.

Works in Employment Program

I am directing the "Operation Mainstream Program," a component of the concentrated employment program which is geared toward rehabilitation of the alcoholic. Would you please add my name to your mailing list for *Inventory?*

Mrs. Barbara D. Richardson
Winston-Salem, N. C.

Pioneer Welfare Project

I would so appreciate getting the magazine *Inventory*. It has a wealth of articles that would be helpful to me in my work with alcoholics in Douglas County. This work is a pioneer project of the Department of Welfare in Minnesota.

Pearl Thorson
Alexandria, Minn.

Staff Psychologist Writes

I have had access to copies of *Inventory* during the past year and found it a useful instrument in expanding my knowledge of alcoholism. I am a staff psychologist at the Appalachian Comprehensive Care Center. Could you place me on the mailing list?

Don Nichol, M.A.
Ashland, Ky.

Useful to Health Educator

Approximately three years ago, I ran across six or eight copies of your *Inventory* journals. They have been of great benefit to me in my work as health educator with the Alcoholism Treatment Unit of the H. Douglas Singer Zone Center.

We at the center are cognizant of the importance of approaching alcoholism from every aspect possible and feel that you have much to offer us in the way of gaining new knowledge to treatment, research and education.

Theodore F. Steele
Rockford, Ill.

Wants to See Each Copy

I would like for my name to be included on the mailing list to receive *Inventory*. I usually see most of the copies, but I would like to be assured of seeing each copy.

Henry Coker
Alcoholic Rehabilitation Center
Black Mountain, N. C.

ever, the drug is taken daily for a few days and then even a very small quantity of an alcoholic liquor is ingested, the patient undergoes a series of most unpleasant reactions. The face, neck and chest of the patient become flushed. He may experience a burning of the eyes, nausea, palpitation of the heart, headache, dizziness, tightness of the chest, mental confusion, faintness, and so on. The patient is either given the drug and told what he will experience if he drinks any alcohol-containing fluid or is actually made to undergo the alcohol-disulfiram reaction in a hospital and then sent home with a supply of the drug. In either case he cannot imbibe any alcohol without experiencing the undesirable reactions. The hope is that this knowledge will bolster his resolve to stop drinking.

A number of people interested in the problem of alcoholism, however, do not favor the use of disulfiram. They point out that while it is possible to frighten an alcoholic to such a degree that he will not drink, this may not solve his fundamental problems or get at the cause of his drinking, and that he may turn to other forms of undesirable behavior.

From a research point of view it is interesting that most, if not all, of the symptoms of the disulfiram-alcohol reaction are believed to be due to the inhibition by disulfiram of the oxidation of acetaldehyde which results from the oxidation of alcohol. The concentration of acetaldehyde in the body increases as a result of the presence of disulfiram, and as has been indicated, acetaldehyde is quite a toxic substance.

Cardiovascular System. It has been generally stated that moderate or even relatively large doses of alcohol have no deleterious effect on the heart, and that cardiac irregularities can only be observed in animals when doses that are nearly lethal are administered. Recent investigations have suggested that this may not be true. It has been reported, for example, that the infusion of moderate amounts of alcohol into dogs, intravenously, over a period of 20 minutes resulted in the release of materials such as ions and enzymes from the interior of the heart cells of these animals and that cardiac contractility was depressed. Depression of contractility of the isolated rat heart was also reported to result from the administration of moderate quantities of alcohol. Others have found changes to occur in the metabolism of the hearts of animals following alcohol administration, such as increased fat uptake, increased activity of the fat splitting enzyme lipoprotein lipase, and increased concentration of fat in the heart.

There is a heart disease or series of diseases known as "alcoholic cardiomyopathy" which has been investigated to an increasing degree in recent years. This disease manifests itself as heart defects and may express itself as cardiac arrhythmias or congestive heart failure. It used to be thought that such heart disorders, observed in some chronic alcoholics, were due to the nutritional deficiencies often found to occur in such patients. More people are now convinced that alcohol per se when taken in excessive amounts over a long period of time may cause cardiac damage. Indeed, observations of heart tissue from alcoholic patients and animals under the electron microscope have revealed intracellular distortions and damage.

Moderate amounts of alcohol have no significant direct effect on blood pressure. With quantities sufficient to produce coma, of course, the blood

pressure falls. There may be a small temporary increase in pressure when a person takes a drink as a result of the irritation of the membranes of the mouth and throat, but such a rise is produced by reflex action and is very short in duration. Alcohol may cause an indirect rise in blood pressure if inhibitions of a person are depressed and the individual becomes involved in aggressive behavior; on the other hand, a tense, anxious individual with blood pressure elevation due to tension may experience a lowering of pressure as a consequence of the tranquilizing effect of alcohol.

In moderate or large doses, alcohol causes the dilation of peripheral blood vessels, especially those of the skin. As a consequence, there is an increased loss of body heat. The action on the blood vessels is believed to be mediated via the vasomotor centers of the brain. Alcoholic beverages have been and still are, to some extent, prescribed by some physicians for the relief of cardiac pain, or angina pectoris. The theory was that alcohol causes the dilation of the coronary vessels of the heart and permits a greater degree of oxygenation of the heart muscle. It is now generally believed that alcohol exerts no such effect on the coronary vessels and that the relief of cardiac pain is simply due to the analgesic properties of the alcohol working on the central nervous system. Thus there is no real improvement in cardiac oxygenation or function, and alcohol should not be used in the therapy of this disorder.

Alcohol promotes the increased excretion of urine as a result of inhibition of the release of antidiuretic hormone from the posterior pituitary gland. It thus acts as a diuretic agent. Recently, another effect has been reported to occur in the kidneys of rats fed alcohol chronically. These animals began to show albumin and blood in the urine after a period of several months, and renal tubular damage was observed. This observation should be confirmed, and the effects of chronic alcoholism on the kidneys studied further.

Muscle. Alcoholic myopathy as well as alcoholic cardiomyopathy has been observed to occur in alcoholics. Such persons may complain of muscle weakness, muscle cramps, tenderness and muscle pain. Interestingly, the muscle tissue of such persons, when examined under the electron microscope, have also shown degenerative cellular changes. Thus prolonged use of alcohol may have a noxious effect on several different types of tissues and organs.

Adrenals. Alcohol exerts some definite effects on the adrenal glands. Moderate or large quantities of alcohol as well as acetaldehyde, the product of alcohol metabolism, increases the output of epinephrine and norepinephrine from the adrenal medullae and of norepinephrine from adrenergic nerve endings. Such increased release has certain biochemical sequelae which I will not go into now. High concentrations of alcohol in the body also promote the release of adrenal cortical hormones, probably via increased ACTH release from the pituitary. The adrenal cortical hormones also, in turn, lead to other effects.

Body Temperature. Alcohol increases the heat loss from the body and tends to reduce body temperature as a consequence of peripheral vasodilation and, in high doses, to the depression of the heat regulating center in the hypothalamus of the brain. A person may "feel warm" af-

ter alcohol ingestion due to increased cutaneous blood flow as a result of vasodilation, and to increased blood flow through the gastric mucosa due to irritation of the mucous membrane by alcohol. However, heat is actually lost, not conserved, and it is therefore incorrect to take alcohol with the idea of warming up when under conditions of external cold.

Blood. Alcohol has a number of effects on the components of the blood. After a large dose of alcohol, the blood sugar rises. Subsequently, a fall in blood sugar, or hypoglycemia, may occur. Alcohol induces a rise in blood lactic acid and, in high concentrations, in free fatty acid concentrations. The vitamin A content of the blood may rise as a result of its release from the liver. Enzymes may appear in the blood that are not normally there as a consequence of their release from the liver, heart and perhaps other tissues. The blood fat or triglyceride levels tend to rise. Sometimes there is also a rise in blood cholesterol levels. Uric acid levels of the blood may rise as a result of decreased uric acid excretion due to a rise in blood lactic acid. Other changes may occur as well.

Gastrointestinal Tract. Taken in small quantities, in diluted solutions, alcohol may aid the digestive process as a result of 1) psychological stimulation and salivary and gastic secretion if a person enjoys alcoholic liquors, 2) stimulation of the taste buds in the mouth inducing increased gastric secretion reflexly, 3) increased flow of gastric juice due to slight irritation of the gastric mucosa by alcohol, 4) the release of the hormone gastrin from the stomach cells, and perhaps also of histamine, increasing gastric secretion, and 5) depression of anxiety, tension, etc. which inhibit digestional processes.

On the other hand, large quantities of alcohol in concentrated form severely irritate the stomach and intestines and decrease gastric secretion and motor function. In severe intoxication, the secretory and motor functions of the entire gastrointestinal tract are strongly depressed. Taken chronically in large amounts, alcohol reduces appetite and olfactory acuity, and leads to gastritis and enteritis with symptoms of anorexia, nausea, diarrhea and pain.

Liver. Alcohol exerts a number of effects on the liver. It depletes the liver of vitamin A stores, releasing the vitamin into the circulation. It has also been recently observed that alcohol causes the release of certain hepatic intracellular enzymes into the circulation. Large doses of alcohol cause a loss of liver glycogen, perhaps due to release of epinephrine and consequent glycogenolysis. Exhaustion of the glycogen supply plus interference with the formation of new glycogen by alcohol may lead to the observed hypoglycemia in acute and chronic alcoholism.

Administration of alcohol, even in a single dose, causes a fatty infiltration of the liver in animals and man. Alcohol may do this by promoting the synthesis of fatty acids in the liver, decreasing the oxidation of fatty acids and, at least in high concentrations, provoking the mobilization of fatty acids from the peripheral fat stores to the liver. There is also an increased formation of triglycerides from fatty acids in the liver. It has been known for a long time that chronic alcoholics frequently show fatty infiltration of the liver

(Continued on page 30)

The ARC at Black Mountain, serving the Western Region, is located just off Old Highway 70 east of Western N. C. Sanatorium.

Serving the Western Region

ARC at Black Mountain

THE physical plant comprising the Alcoholic Rehabilitation Center at Black Mountain was turned over to the State by the architects and general contractors on January 15, 1969. Sixty days later the first patients were admitted.

Simple? Not exactly. During this 60-day period an initial staff of around 50 people had to be recruited. Buildings had to be cleaned, the furniture placed, the kitchen stocked with food and medical and pharmaceutical supplies purchased.

And that wasn't all. Some inservice training had to be arranged quickly. As soon as the staff members arrived they were sent to Broughton Hospital for "beginning" training. The staff members who had had prior experience with alcoholics began teaching also. This continues to be a concern. Inservice training by more experienced staff members and on-the-job training is being augmented by bringing in outside experts. The staff of Highland Hospital and Bowman-Gray School of Medicine, among others, have been called on.

In addition to preparing themselves, ARC staff members have been involved in preparing the community to receive them and the patients. To this end they have given many talks

Among the staff members who greeted the first patients were: (l to r) Mrs. Ruth Page, director of nursing; Bill Link, chief social worker; Roy Creech, business manager; Dr. James Spencer, acting medical director; Guy Moore, psychologist; and Dr. John Sill, physician.

before local civic clubs—Lions, Rotary, Kiwanis, Chamber of Commerce, Business and Professional Women's Club, PTA's, as well as Alcoholics Anonymous and Al-Anon groups in the area.

The community has responded admirably. The chaplain of Western North Carolina Sanatorium has become involved in Sunday morning worship services for the patients and individual counseling. Sanatorium officials have helped work out schedules to share the use of their facilities, such as the canteen and barber and beauty shops. Also, the ARC has contracted with the sanatorium for X-ray and laboratory services.

Memorial Mission Hospital in Asheville is cooperating by providing emergency medical-surgical coverage.

The ARC's efforts to gain acceptance must, and have, extended beyond the local community into the region it serves. The Western Region is composed of thirty counties. They are: Alexander, Alleghany, Ashe, Avery, Buncombe, Burke, Caldwell, Catawba, Cherokee, Clay, Cleveland, Gaston, Graham, Haywood, Henderson, Iredell, Jackson, Lincoln, McDowell, Macon, Madison, Mecklenburg, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga, Wilkes and Yancey.

Pre-opening and post-opening contacts between the center and the mental health clinics in the region have resulted in reciprocal visiting among staff members. A "shared position" arrangement, for instance, has been worked out with the New River Mental Health Center. The center sends one of its staff members to the ARC one day a week and vice versa. Other mental health facilities and health, welfare and other community agencies that were not visited have received a pamphlet about the ARC.

A basic staff headed by the acting medical director, Dr. James Spencer, an internist and former staff physician at Broughton Hospital, was on hand to receive the ARC's first patients on March 17 who were transferred to the center from Broughton Hospital. Subsequent patients have been admitted directly from the counties.

"Our basic treatment program," Dr. Spencer said, "consists of medical care, education about alcohol and alcoholism, group therapy and referral for continued treatment." The latter may be carried out through the ARC's outpatient department or through community resources in the patient's own county. The referral is made in a "release planning session" with the patient toward the end of his stay of approximately 30 days.

The patient is also involved in a variety of rehabilitation therapies,

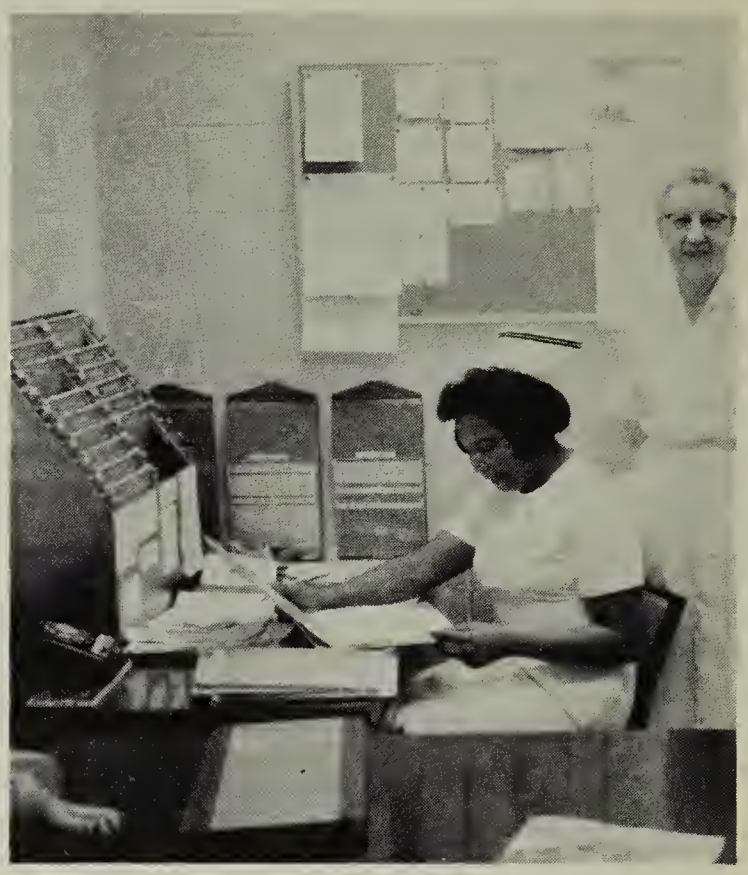
Covered walkways connect the brick and cinder block buildings of the ARC. The complex consists of an administrative building, two dormitories, a therapy building and cafeteria.

including vocational counseling, occupational and recreation therapy, spiritual counseling, industrial therapy and Alcoholics Anonymous.

Along with industrial or work therapy, patients are required to participate in routine assigned housekeeping duties which include bed changes twice a week, maintenance of their own living areas, and helping out with the general clean up on Saturdays.

The ARC also works as much as possible with family members by providing education, counseling and referral services. Each patient, on admission, is assigned to a group leader who is the primary counselor for the patient and his family during the patient's stay. Family members are encouraged to contact the group leader at any time to arrange for an interview to discuss any aspect of the patient's treatment or progress.

After the patient has been at the ARC for a week, his family may participate in Family Day on Wednesdays from 9 a.m. to 4 p.m. On this day the group leader will see the family members for any purpose necessary or desired. There are a few rules. Family members planning to visit are requested to notify the ARC in advance. The patient is permitted to leave the grounds and have lunch with his family at a nearby restaurant, but must be back by 1 p.m. Children may visit only in the lounge or lobby areas.



Mrs. Lytle (seated), charge nurse, and Mrs. Page make plans for the day's work.

"Since we will initially take only sober patients who come voluntarily, we expect to be able to treat most

The staff has a "therapeutic aid" in this view looking south from the front of the ARC.

Patients sit around and talk in one of the dormitory lounges.

medical problems in our infirmary," Dr. Spencer continued. "However," he said, "arrangements have been made with Mission Memorial Hospital to take acute medical emergencies." Western N. C. Sanatorium, located within sight of the ARC, has agreed to do X-ray and laboratory studies as needed.

Already 111 (as of June 16) patients have been treated and discharged, according to Dr. Spencer. Of these, 83 were discharged "with consent" and 28 were discharged "against medical advice."

In all 152 patients from 21 counties have been admitted. The number of patients and the counties are: Avery, 2; Buncombe, 34; Burke, 1; Caldwell, 2; Catawba, 18; Cleveland, 2; Gaston, 15; Graham, 1; Haywood, 9; Henderson, 15; Iredell, 3; Jackson, 1; Lincoln, 3; Macon, 2; Madison, 2; Mecklenburg, 20; Mitchell, 1; Rutherford, 13; Transylvania, 1; Watauga, 4; and Wilkes, 3.

The opening of the ARC at Black Mountain represents completion of step two in the N. C. Department of Mental Health's plans for an ARC in each of its four regions. In March the "new ARC at Butner" that will

Admissions officer, Mrs. Greta Spivey, admits a patient.

A view of the administration building as seen through the front of the cafeteria.

eventually serve only the North Central Region opened. A third ARC for the Eastern Region is almost ready to open at Greenville. Funds to build these three ARCs were obtained from a "five cents a bottle" price increase on ABC store products added by the N. C. General Assembly in 1965. Operating funds were appropriated by the 1967 General Assembly. The 1969 General Assembly has been asked for funds to establish the fourth ARC at Dorothea Dix Hospital in Raleigh for the South Central Region. If the latter is granted all four ARCs should be operating by the end of July.

Until the opening of the new ARCs at Black Mountain and Butner, there was only one center for the treatment of "vountary" patients to serve the entire State—the old 54-bed center at Butner, an army-barracks type "temporary" building constructed during World War II.

In contrast, the Black Mountain facility is composed of five brick and cinder block buildings. The complex consists of an administration building that contains the infirmary as well as the admission and administrative offices; two dormitories, one with two wings and the other with three wings; a therapy building; and a cafeteria. Covered concrete walkways connect the buildings.

The staff which has been assembled during the past several months includes housekeeping, dietary and maintenance personnel, office and business staff, nurses and attendants, social workers and physicians, rehabilitation counselor and psychologist. Other rehabilitative personnel will be recruited as the number of patients and programs for their care and rehabilitation increases.

Eating hours at the cafeteria are: breakfast, 6:45-8:00 a.m.; lunch, 11:30 a.m.-12:00 noon; and supper, 4:30-5:30 p.m.

Dr. Hoff, medical director, Bureau of Alcohol Studies and Rehabilitation, Virginia State Department of Health, was a distinguished lecturer of the John W. Umstead Series of Distinguished Lectures held in Raleigh, February, 1968. This lecture was based on a previously published paper reprinted here from the *Virginia Medical Monthly*, Vol. 94, pages 515-518, Sept., 1967.

The overall aim of these investigations is to improve our own therapeutic success and, hopefully, the treatment efficiency of others.

A New Plan for the Study and Comprehensive Treatment of Alcoholics in Virginia

BY EBBE CURTIS HOFF, M.D.

IN 1948, the General Assembly of Virginia enacted legislation providing for the study of problems of alcoholism, the treatment of persons addicted to the excessive use of alcohol, and the establishment of a Division of Alcohol Studies and Rehabilitation in the Virginia State Department of Health. The Act also provided for the promotion of preventive and educational programs within the division. According to the legislation, any person who, through the excessive use of alcoholic beverages, has become unable to care for himself, his family or his property, or has become a burden on the public, may voluntarily request admission to the hospital and clinical facilities established under the Act. Persons admitted for care and treatment in the hospital and clinic facilities were to be selected in accordance with policies to be established and should be deemed the type of person to whom such care would be of value to the patient individually and/or for the research objectives of the division. Patients admitted for treatment to the hospitals or clinics were to pay for the expense of their care and treatment, in so far as they are able, provided, however, that no person should be charged at a rate greater than the actual cost of care and treatment.

Since 1948, 8,505 patients have been accepted (all on a voluntary basis). The treatment facilities are operated on a coordinated basis and include a specialized 12-bed unit at the Medical College of Virginia in Richmond as well as arrangements for admission to the departments of psychiatry or medicine at the University of Virginia Hospital in Charlottesville. There are presently 10 outpatient clinics located in centers of population throughout the State. These are (in order of date of foundation) clinics at Richmond (MCV), Roanoke, Norfolk, Charlottesville (University of Virginia Hospital), Abingdon, Falls Church, Danville, Harrisburg (an extension from Roanoke) and Winchester. Patients are referred from several sources as follows: Self-referred, 7.2%; relatives, 9.1%; friends, 9.4%; courts, 4.7%; social agencies, 3.9%; physicians, 34.6%; spouses, 6.7%; clergy, 3.6%; Alcoholics Anonymous, 8.2%; old division patients, 4.7%; and others, 7.9%.

A public information program encourages alcoholic patients to apply for treatment as early as possible in the course of their condition. The outpatient clinics constitute the first line of the intake process and in these clinics an alcoholic or a person who believes he may have a problem with alcohol can freely discuss his difficulties with a member or members of the staff in the clinic who may recommend therapy as an outpatient or referral for hospitalization in the division's hospital facilities at the Medical College of Virginia or the University of Virginia Hospital. Such hospitalization usually lasts about seven days but may be longer. This is followed by long-term treatment in the outpatient clinic nearest to the patient's home, usually the clinic at which he made

Treatment is comprehensive

his first contact. The division's program is designed to foster maximal cooperation and collaboration with private practitioners. As stated, at least a third of the referrals to the divisional clinics are made by private physicians who are kept informed of diagnostic studies, treatment recommendations and prognostic evaluations. Our aim is to aid private physicians in the management and care of alcoholic patients as a part of their own practice. The division's philosophy of rehabilitation is based upon the concept that there is a constellation of etiological factors which are operating in different proportions in each patient and includes metabolic, psychologic, socio-cultural, and spiritual parameters. Thus, the effort is made to establish a sound diagnosis for each patient and to provide for him a treatment team that is multidisciplinary.

Treatment is comprehensive and includes the family as well as the patient. It is recognized that attention should be given not only to acute drinking problems but also to job and family problems as well as the emotional and other problems of living and functioning. Careful attention is given to the readjustment of the patient and his family as the patient continues to maintain abstinence.

The processes of recruitment, intake, and initiation of therapy are considered highly important and extremely relevant to subsequent outcome. At present, no patients are legally committed to the division. However, there are degrees of "voluntariness" and the quality of moti-

vation for recovery varies. Techniques for assisting the patient in developing motivation are regularly used. About 90% of those who apply are accepted for treatment by the division. The rest are referred to other agencies. There may be a single or several referral interviews during which the clinic doctor hears the patient's story; usually a social worker also derives a social history of the main presenting problem, including those of the family. Ordinarily, the patient is admitted to one of the division's hospital services within a day or two, but physicians in some of the outpatient clinics prefer to follow their patients in the clinic on an outpatient basis for several weeks or longer before admitting them to the hospital. Some patients do well in the clinic without hospitalization.

The purpose of hospitalization is to make a detailed medical and psychologic diagnostic evaluation and to form a pertinent social appraisal of the patient and his family within a controlled hospital environment that is supportive and non-judgmental and is oriented towards developing an individualized plan of long-term follow-up therapy in the outpatient clinic.

About half of the patients are admitted from the outpatient clinics in an alcohol-free state, while the remainder are in a phase of post-alcoholic withdrawal or acute intoxication. Tranquilizers, sedative medication and other drug treatments are used adjunctively on a conservative basis, as indicated, and while in hospital the patients take part in group therapy, individual therapeutic interviews with members of the staff and also participate in a series of therapeutic films and closed circuit television programs, the main purpose of which is to provide information and guidance about their condition and how it may be handled with their cooperation. The division works actively with Alcoholics Anonymous and other voluntary and local and State social and welfare agencies and health services. Antabuse (disulfiram) and other pharmacological aids in the comprehensive treatment program are offered. It has been found that Antabuse significantly increases the recovery rate, partly because it selects more highly motivated patients who show less deterioration.

The division engages in and sponsors an organized program of investigation and research into the causes, treatment and prevention of problem drinking. This research includes studies of the physiologic, pharmacologic and biochemical aspects of alcohol as well as clinical investigation of emotional and metabolic problems of alcoholic patients and studies of the relations between patient diagnostic and other characteristics, modalities of therapy, and treatment outcome. With respect to the latter research, a project is now under way to seek significant correlations between demographic, diagnostic and other characteristics of alcoholic patients, treatment modalities used in inpatient and outpatient phases of therapy and outcomes of therapy in terms of patient rehabilitation. To accomplish this, we are first conducting an analysis of the inpatient and outpatient records of

all or samples of records of 8,000 patients who have been under treatment in the division from 1948 to the present. The initial phase of the study will constitute a precise evaluation of these records leading to the development of a code manual by means of which potentially significant items for each patient can be transferred to a form which will permit punching and storage of the information for computer manipulation. As suggestive associations emerge from the statistical analysis, it is intended to evolve new and more precise data retrieval techniques for the study of new patients to be admitted. As this second phase proceeds, we will formulate and test new hypotheses based upon conclusions reached in the initial retrospective study. We then propose, as a third phase, to develop an instrument which we can use in a direct follow up of the patients with whom we have already worked as well as patients to be treated in the future.

The overall aim of these investigations is to improve our own therapeutic success and, hopefully, the treatment efficiency of others. In particular, we seek to establish more confident guidelines in applying specific therapies or combinations of therapies to patients with particular characteristics.

At its last session, in the spring of 1966, the General Assembly appropriated the sum of one million dollars to establish at the Medical College of Virginia a center for research into the causes and treatment of alcoholism. This center will be under direct supervision of the Division of Alcohol Studies and Rehabilitation. The basic functions of the new center will be the study and investigation, on a comparative basis, of the causes, treatment and prevention of alcoholism, and the education and training of doctors, nurses, students, social workers and research workers into the cause and treatment of this

(Continued on page 31)

Dr. Ebbe Curtis Hoff (center), distinguished lecturer of the 1968 John W. Umstead Series of Distinguished Lectures, is shown here with Thomas Plaut, Ph.D., also a distinguished lecturer, and Norbert Kelly, Ph.D., co-chairman of the series and director of the Division of Education of the Department of Mental Health which sponsored it.

VOL. 18, NO. 4 INVENTORY APRIL-JUNE, 1969

ARTICLES AND FEATURES OF INTEREST ON ALCOHOL AND ALCOHOLISM

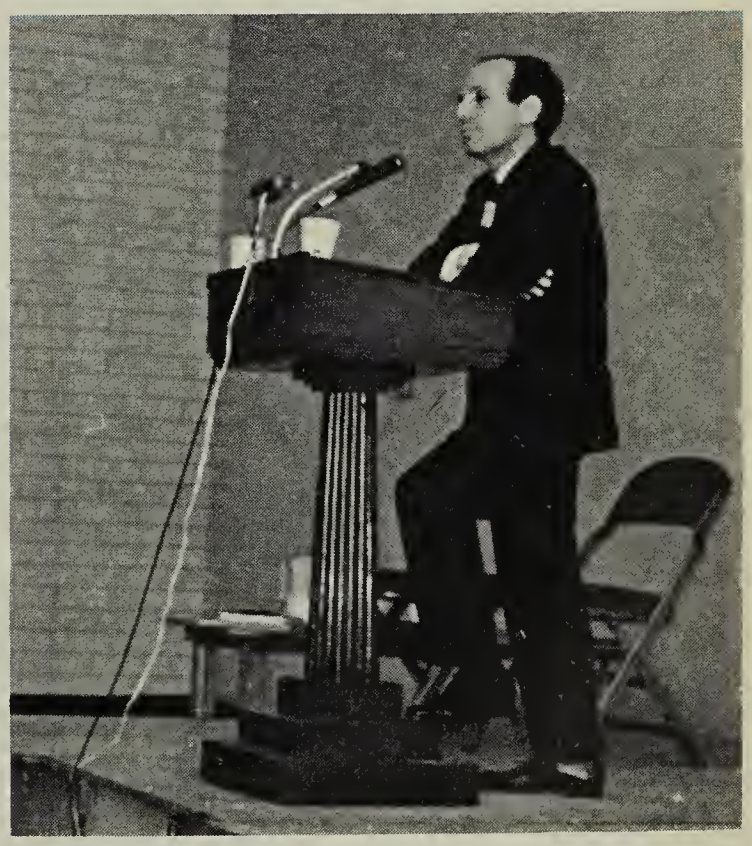
Several preventive approaches could be pursued with a reasonable likelihood of at least some reduction in alcoholism rates.

A National Overview of Alcohol Problems: THEIR CONTROL AND PREVENTION

BY THOMAS F. A. PLAUT, PH.D., M.P.H.

Editor's Note: This article is a continuation of Dr. Plaut's 1968 John W. Umstead Distinguished Lecture. The first part of the lecture, published in the Jan.-March, 1969 issue of *Inventory*, covered the range of alcohol problems, the nature of current treatment programs and a strategy for improving American treatment programs. Dr. Plaut is assistant chief of the National Center for Prevention and Control of Alcoholism, National Institute of Mental Health, Chevy Chase, Md.

Within the next few weeks the United States Supreme Court will be hearing oral arguments in the case of Powell v. Texas. The constitutional issues in this case center around whether or not a chronic alcoholic may be criminally prosecuted for the offense of public drunkenness. Two prior lower level court decisions have already ruled that such incarceration is unconstitutional. The significance of a favorable Supreme Court decision on this case—and the Court is likely to rule before it recesses in the early summer of 1968—can be seen in the fact that approximately 40 per cent of all the arrests in the United States are for the offense of public drunkenness and a very large proportion of these arrests are accounted for by individuals who undoubtedly would fit the Court's definition of "chronic alcoholics." At the present time, with a few notable exceptions, communities tend to sweep the problems of homeless alcoholics under the rug. These persons receive emergency medical care only to prevent a fatality and even then many preventable deaths occur annually in jails or other correctional institutions. The fact that a very large proportion of homeless alcoholics are repeatedly arrested, found guilty, sentenced and released, is an inhumane and totally ineffective procedure that should have been abandoned many years ago.



Skid-row alcoholics require assistance for many different kinds of difficulties. Frequently they have both acute and chronic medical problems; all too often they are vocationally untrained or undertrained, and only rarely are they socially equipped to cope in our complicated society. An added element of the tragedy is the continuing unwillingness of almost all community agencies—with the exception of a few local welfare departments, the Salvation Army, and some church-related missions — to provide even a minimum of humane care and treatment for these unfortunate men and women. In the past jails have been used both as quasi-medical institutions (and they are not, of course, really equipped to function in this capacity) and for shelter purposes (nor were they intended to serve this community function). Thus, one of the immediate and direct implications of the anticipated United States Supreme Court decision in the case of *Powell v. Texas* will be to force medical care and other health agencies to assume their appropriate responsibilities and also to force welfare departments and other similar agencies to take their appropriate responsibilities. Because of the crucial residential and shelter needs of very substantial numbers of homeless alcoholics, the "Alcoholic Rehabilitation Amendments of 1968" provide for special assistance to communities (as parts of community mental health centers wherever possible) for halfway houses and other types of residential facilities for homeless alcoholics.

The challenge of providing humane care and treatment and effective rehabilitation services of skid-row alcoholics is an immense one. It cannot be handled by one or two agencies alone but requires a type

Virtually all illnesses are

of mobilization of community resources that has only rarely occurred in the past. Professional workers, community leaders and individual citizens should not be satisfied with piecemeal and partial solutions to either the problem of public drunkenness or general problems of alcoholism. There is a grave danger that the existence of one or another unit of a total comprehensive community network will become the central focus and will be viewed as some type of an almost magical answer to a far more complex problem.

There are, for example, some indications already that the establishment of "detoxification centers" will be seen as the most crucial element of a community's response to the forthcoming Supreme Court decision. While it is true, of course, that a substantial number of alcoholics will require emergency medical services to deal with the toxic effects of large amounts of alcohol that they have consumed, it is certainly not clear that these services should be provided primarily by separate newly created "detoxification centers." The complexity of medical problems found among many alcoholics argue strongly for strengthening current emergency services—with extra funds and personnel—so these could at least function as an initial diagnosic setting through which persons suffering from the acute effects of excessive alcohol intake could flow and be screened prior to a decision being made regarding their later disposition. And, it is important to recall that emergency medical services are only a single element in the total range of services required for humane treatment and effective man-

agement of the problem of public drunkenness.

While the importance of radically improving current treatment services for alcoholics and other problem drinkers cannot be exaggerated, it nevertheless should never be forgotten that treatment approaches alone are extremely unlikely to adequately control the problem of alcoholism. It is only by relying on preventive approaches that it will ultimately be possible to significantly reduce rates of alcoholism. This point has been dramatically made by Edward McGavran, former Dean of the University of North Carolina School of Public Health, who stated "Contrary to our beliefs generally, there is no evidence that control or eradication of any disease has been accomplished by the approaches, procedures, techniques, and activities directed at early diagnosis and treatment of disease in individuals."

There have not, as yet, been any dramatic breakthroughs in the area of medical, psychological or social research which point to preventive approaches of ensured efficacy. However, a number of preventive approaches have been suggested and several of these should be pursued with reasonable likelihood of at least some reduction in rates of alcoholism. Others, while theoretically possible, are not likely to be of much immediate utility.

If in some manner alcoholic beverages could be chemically modified so that drunkenness was far less likely to occur or so that the "addictive" qualities of the substance could be eliminated, this clearly would be accompanied by a substantial reduction in alcoholism. Since the bulk of alcoholics do not develop this problem overnight but rather progress through substantial periods of excessive drinking with many episodes of drunkenness if, somehow, drunkenness could be avoided then there almost certainly would be a significant reduction in rates of alcoholism. Secondly, if some "functional equivalent" could be found for the current social use of alcoholic beverages, then it might well be that very large numbers of persons would stop drinking or greatly reduce their use of beverage alcohol. It is very clear that drinking has significant social and psychological functions for most Americans. The reference here is not to problem drinkers, but rather to the average social drinker. If some other substance — less potentially dangerous—could be discovered and introduced it might well replace alcohol. It is also conceivable, although rather unlikely, that a differently constituted society would not require or utilize a substance with particular pharmacological properties of alcohol.

A traditional public health approach to prevention involves the early case finding of individuals with prodromal elements of an illness or condition. It is generally believed that virtually all conditions or illnesses are easier to bring under control during their early phases. Such an approach would also clearly appear to be applicable to alcoholism. At present, because of the continuing rejection of alcoholics and the stigma attached to this condition, just the opposite often occurs. That is, alcoholics are likely to be identified and to label themselves as being alcoholics only in the very later stages of their condition. Certainly the early identification, referral and treat-

ment of persons who are just beginning to exhibit destructive and damaging drinking patterns would be an extremely useful approach to prevention.

Even more fruitful, although current knowledge does not really enable us to utilize this approach, would be the identification of individuals who have a particularly high risk for the development of alcoholism. This might be done if certain physiological indicators were found to be highly correlated with a later development of alcoholism or if certain personality types occurred with substantially greater freqency among alcoholics than among individuals who did not have this problem. If research should make substantial progress in either of these areas, then it might be possible through mass screening procedures to discover those persons who had particularly high potentiality for becoming alcoholics and then to focus on them through various types of educational and treatment approaches.

The traditional mental health approach to the prevention of alcoholism is based on the widely-held belief that psychological difficulties are one key element in the development of alcoholism. Consequently, if a society could be created with fewer psychiatric "casualties", i.e., if better mental health could be developed generally, this would most likely be accompanied by a reduction in the rates of alcoholism. Some persons have suggested that a better society —one involving less alienation and one involving more meaningful social relations between individuals— would be a society with vastly improved psychological well-being.

Any list suggesting approaches to the prevention of alcoholism and other alcohol problems logically must include the total elimination of alcoholic beverages. It is, however, in view of accepted social practices and attitudes in this regard, extremely unlikely that the United States shortly will be moving in this direction. In addition, some persons have argued that in the absence of very significant social changes, the total elimination of beverage alcohol might be accompanied by other social and psychological problems of almost equal pathology. Reference here is not to the drinking of alcoholics, but rather to the socially and psychologically important functions that drinking fulfills for many individuals in our society.

The final preventive approach— and one that may have particular potentialities for success — involves the modification of current American drinking patterns, practices and attitudes.

Evidence from cross-cultural studies strongly suggests that there is a relationship between the kinds of "normative" drinking patterns in a society and the magnitude and nature of alcoholism and other problems in that society. Some of these differences and their importance were presented by Dr. Pittman in the first lecture of this series.[1] Since the passage and repeal of the Prohibition Amendment, there has been a virtual "conspiracy of silence" in relation to any efforts to try to modify American drinking practices. As was indicated earlier, the issues still tend to be dichotomized in terms of controversy between the "wets" and the "drys." Fortunately, there is increasing evidence that some of the total blocks in communication that have characterized the last thirty years are beginning to disappear and

---

1/ Pittman, David J., "Sociological Aspect of Alcohol and Alcoholism: An International Overview."

that it now may be possible to make some progress in differentiating between those types of drinking behavior which are socially adaptive and those which are not. This would definitely include some basic modifications in the attitudes of drinking Americans towards those Americans who prefer not to use alcohol beverages. If the emotionalism that for too long has characterized American attitudes about drinking (and abstaining) could be overcome, an important step would have been taken towards bringing about a significant modification in American drinking practices. This emotionalism may well be a significant factor in the development of alcoholism. The confusion in the culture regarding what kinds of drinking behavior are acceptable and what kinds of drinking behavior are not, undoubtedly increases the likelihood that this particular area of behavior will become a focal point for pre-existing psychological difficulties. For example, if stronger social sanctions were invoked against the man or woman who is drinking dangerously or who is becoming intoxicated, these would serve as a preventive barrier for persons who otherwise might develop serious drinking problems.

This particular approach to the prevention of alcoholism and other alcohol problems—involving proposals for modifications of American drinking problems — requires broad social changes. Such proposals "ask that the public assume total responsibility for alcohol; that the painful and troubled experiences of Prohibition be put aside; and that current social freedom surrounding alcohol use be critically examined and scientifically studied for their strengths and weaknesses. A major shift in social attitudes and policies is required to match the prevalence, the persistency, the complexity and the interrelatedness of alcohol problems."[1]

Concluding Remarks

That the magnitude of alcoholism and other drinking problems require concerted national and local action has long been clear. However, now, for the first time, the opportunity exists to finally take the necessary initial steps toward the eventual control and prevention of these varied and wide-ranging alcohol problems. At the level of treatment services, there is increasing awareness that no single agency or type of agency can be expected to provide the range of care, treatment and rehabilitative services required for persons with serious drinking problems. Both the "Partnership for Health" Program (P.L. 89-749: Comprehensive Health Planning and Public Health Services Amendments of 1966) and the rapidly growing community mental health centers program emphasize the importance of mobilization of a wide range of community resources in a carefully planned manner so as to ensure equal access to services for all persons. Since it is generally acknowledged that understanding of psychological and social factors is a crucial element in providing adequate treatment and rehabilitative services for alcoholics, the community mental health centers—with their wide range of varied services—seem particularly suited to providing leadership in developing the necessary services for these persons at the community level. Clearly, however, these mental health centers alone cannot provide the varied services required by problem drinkers. This

---

1/ *Alcohol Problems: A Report to the Nation by the Cooperative Commission on the Study of Alcoholism,* Oxford University Press, New York, New York, 1967, pp. 188-189.

last fact will shortly be highlighted by the implications for community health and welfare agencies of the anticipated Supreme Court decision (in the case of Powell v. Texas) which is likely to radically alter the ways in which communities manage the harsh and omnipresent problems of public intoxication.

The passage of time since Prohibition and Repeal, as well as some gradual changes in American attitudes about drinking, are beginning to create a qualitatively different climate for the development of alcoholism programs and for the mounting of potentially extremely rewarding approaches to the prevention of alcoholism and other types of drinking problems. If American society can move from its virtual obsession with issues of drinking and abstinence to a consideration of the far more important distinction between different kinds of drinking, i.e., those that are potentially damaging or harmful and those that are not, this may represent a unique opportunity to overcome many of the problems associated with the use of alcoholic beverages. It will, however, require some radical types of social change and, above all, will necessitate the average American "social drinker" taking far more responsibility for his own drinking and that of others around him than has occurred in the past. Hopefully, it will shortly be possible to have rational discussions about alcohol problems and their solutions and to create a new and less emotional climate for action in this field. In the absence of such substantial changes in American mores and attitudes, it is unlikely that significant progress can be made in either the care and treatment of alcoholics or in the equally important task of the prevention of alcoholism.

PHARMACOLOGY OF ALCOHOL

CONTINUED FROM PAGE 15

as well as cirrhosis. Approximately eight per cent of chronic alcoholics develop cirrhosis, and this disorder may be fatal. It has been suggested that a long-standing fatty liver may ultimately develop into a cirrhotic liver. In the past it has been thought that the fatty infiltration and cirrhosis of chronic alcoholics is caused by inadequate nutritional intake or increased requirements of certain nutrients such as choline. We are presently coming back to the point of view that alcohol itself may cause damage to liver cells. Indeed, degenerative changes of such cells have been observed in men and animals receiving alcohol chronically. The precise biochemical mechanisms by which alcohol may damage cells are not yet known.

I have discussed the metabolism of alcohol, and have tried to point out that alcohol exerts a large variety of effects on various tissues and organs in the body. Despite the fact that the biochemistry and pharmacology of alcohol have been studied for over a hundred years, many questions of cause and effect have yet to be determined. Alcohol is certainly not an innocuous drug, despite its wide and joyful use and acceptance in our society. We are currently focusing our antagonisms on drugs such as marihuana and LSD. In terms of total human consumption and effect, I would guess that alcohol ought to give us more cause for worry. The psychiatric aspects of alcohol are important, and the social effects have become evident. I feel, however, that a concern with the problem of alcohol and alcoholism ought to include a consideration of the effects of this drug on organs other than the brain.

COMPREHENSIVE TREATMENT

CONTINUED FROM PAGE 24

condition. It is provided that the center will include, but not necessarily be limited to, the following facilities: (a) facilities for research into causes, diagnosis and existing and new methods of treatment for alcoholism; (b) facilities for acute emergency cases and the study of these; (c) an intensive care unit; (d) an inpatient living unit to test group therapy and other treatment methods; (e) day care facilities to permit the evaluation of treatment without hospitalization and transitional treatment stages and facilities for outpatient care. The new center will include necessary conference areas for teaching and instruction. The bill specifically approves the acquisition of staff adequate to perform the clinical, investigative and educational functions of the center.

This enabling legislation represents a significant step forward in the growing attention being given in the United States and Canada to the serious social and health problems of alcohol addiction and dependency. Especially, there will now be the opportunity for the development of a medical school-based center which will engage in clinical and experimental investigation and serve as a model and guide for treatment. It is hoped that a knowledge of procedures and principles derived from the new program will help private practitioners, general hospital staffs, clergy and others. In carrying out this purpose, the center will conduct training conferences and seminars, as well as provide opportunities for doctors, nurses and others to engage in temporary or prolonged periods of special study and postgraduate education. The center will stand ready to participate in the education of medical, nursing, and social work students as well as interns, residents and chaplaincy training students. The center will cooperate with physicians and other professional individuals as well as educational, welfare, and social agencies. Since the total number of patients in the center at any one time will be limited to a maximum of 50, it is recognized that the program is not designed to handle directly, by any means, any but a fraction of the alcohol problems in the state.

An important feature of the center will be an ongoing program for study of methods and procedures for data collection, storing, and processing, as well as information retrieval, using modern computer techniques. The entire staff, as stated, will be concerned with investigating criteria for recovery and correlation of diagnostic and prognostic factors with actual therapeutic outcome. The program will provide a setting in which special personnel can work on approaches toward prevention of alcoholism. Such studies will include social and cultural attitudes towards drunkenness and excessive drinking. Investigation of such issues as accident prevention and highway safety can also be carried out.

It is anticipated that the next few years will see increased governmental concern for alcoholism problems. No one particular governmental level—federal, state or local—can possibly be expected to assume all the responsibility. It is encouraging that the health services are showing an increasing interest as are also those devoted to education and the law. The establishment of the new National Center on Alcoholism in the National Institute of Mental Health is predictive of the trend towards a more effective attack on this major problem of our times.

DIRECTORY OF OUTPATIENT FACILITIES BY COUNTY —for ALCOHOLICS and/or THEIR FAMILIES

Key to Facilities

+ Community Alcoholism Program
(supported jointly by the community and the N. C. Department of Mental Health)

*** Community Alcoholism Program**
(supported largely by funds from local boards of alcoholic beverage control)

‡ Joint Mental Health and Alcoholism Facility
(supported by the community and the N. C. Department of Mental Health)

† Mental Health Facility
(supported by the community and the N. C. Department of Mental Health whose services are available to alcoholics and their families)

Competent Help Is Available At The Local Level

ALAMANCE—

+ *Alamance County Council on Alcoholism,* Room 802, N. C. National Bank Bldg., Burlington 27215; Tel: 919-226-4403.

† *Alamance County Mental Health Clinic,* 221 Graham-Hopedale Rd., Burlington 27215, Tel: 919-227-6271.

ALLEGHANY (See Watauga)

ANSON—

† *Anson County Health Department,* Wadesboro 28170, Tel: 704-694-2516.

* *Education Division, Board of Alcohol Control,* 125 Wade St., P. O. Box 29, Wadesboro 28170, Tel: 704-694-2711.

AVERY (See Watauga)

BERTIE (Hertford)—

+ *Roanoke-Chowan Alcohol Information and Service Center,* 111 Belmont St., P. O. Box 143, Windsor 27983, Tel: 919-794-2895.

BEAUFORT (Hyde, Martin, Tyrrell, Washington)—

† *Tideland Mental Health Center,* 418 West Second St., Washington 27889; Tel: 919-946-4640.

BLADEN (See Robeson)

BUNCOMBE—

+ *Alcohol Information Center,* Parkway Offices, Asheville 28802, Tel: 704-252-8748.

† *Mental Health Center of Buncombe County,* 415 City Hall, Asheville 28801, Tel: 704-254-2311.

BURKE—

* *Burke County Council on Alcoholism,* 211 N. Sterling St., Morganton 28655; Tel: 704-443-1221.

CAMDEN (See Pasquotank)

CARTERET (See Craven)

CABARRUS—

† *Cabarrus County Mental Health Clinic,* 102 Church St., N.E., Concord 28025; Tel: 704-786-1181.

CATAWBA—

* *Catawba County Council on Alcoholism,* 420 Seventh Ave., S. W., Hickory 28601; Tel: 704-328-3564.

CHOWAN (See Pasquotank)

CLEVELAND—

† *Cleveland County Mental Health Clinic,* 101 Brookhill Rd., Shelby 28150; Tel: 704-482-3801.

CRAVEN (Carteret, Jones, Pamlico)—

‡ *Neuse Mental Health and Alcoholism Center* (Craven County Hospital, New Bern 28560; Tel: 919-638-5173, Ext. 294)

+ *Division on Alcoholism,* 411 Craven St., P. O. Box 1466, New Bern 28560; Tel: 919-637-5719.

+ *Division on Alcoholism,* 506 Broad St., P. O. Box 82, Beaufort 28516; Tel: 919-728-4033.

COLUMBUS (See Robeson)

CUMBERLAND—

† *Cumberland County Mental Health Center*:

+ *Division on Alcoholism,* Cape Fear Valley Hospital, Fayetteville 28302; Tel: 919-484-8123.

DARE (See Pasquotank)

DURHAM—

† *Department of Psychiatry,* Duke University Medical Center, Durham 27706; Tel: 919-684-8111, Ext. 3416.

* *Durham Council on Alcoholism,* 602 Snow Bldg., Durham 27702; Tel: 919-682-5227.

EDGECOMBE (Nash)—

† *Edgecombe-Nash Mental Health Clinic*

+ *Division on Alcoholism,* 228 Hammond St., Rocky Mount 27801; Tel: 919-442-8021.

FORSYTH—

† *Department of Psychiatry, Bowman Gray School of Medicine,* N .C. Baptist Hospital, Winston-Salem 27103; Tel: 919-725-7261.

† *Forsyth County Department of Mental Health*:

+ *Alcoholism Program of Forsyth County,* 802 O'Hanlon Bldg., 105 W. 4th St., Winston-Salem 27101; Tel: 919-725-5359.

† *Forsyth County Mental Health Unit,* 1020 E. 7th St., Winston-Salem 27101; Tel: 919-722-0364.

GASTON—

† *Gaston County Mental Health Center:*

+ Center For Alcohol Related Problems, 302 S. York St.; Gastonia 28052; Tel: 704-864-9771.

GUILFORD—

* *Alcohol Education Center,* P. O. Box 348, Jamestown 27282; Tel: 919-454-2794.

Family Service Agency, 1301 N. Elm St., Greensboro 27401; Tel: 919-273-0523.

Family Service of High Point, 113 Gatewood Ave., High Point 27260; Tel: 919-883-1709 or 919-833-2119.

+ *Greensboro Council on Alcoholism,* 216 W. Market St., 206 Irvin Arcade, Greensboro 27401; Tel: 919-275-6471.

† *Guilford County Mental Health Center,* 300 E. Northwood St., Greensboro 27401; Tel: 919-273-8281.

† *Guilford County Mental Health Center,* 942 Montlieu Ave., High Point 27262; Tel: 919-888-9929.

HALIFAX—

† *Halifax County Mental Health Center,* 701 Jackson St., P. O. Box 577, Roanoke Rapids 27870; Tel: 919-537-6174.

HARNETT (See Lee)

HENDERSON—

* *Alcohol Information Center,* 2nd floor, City Hall, P. O. Box 472, Hendersonville 28739; Tel: 704-692-8118.

† *Henderson County Mental Health Clinic,* 820 Fleming St., Hendersonville 28739; Tel: 704-692-2138.

HERTFORD (See Bertie)

HOKE (See Moore)

HYDE (See Beaufort)

IREDELL—

† *Iredell County Mental Health Clinic,* 221 South Center St., Statesville 28677; Tel: 704-872-7901.

JONES (See Craven)

LEE—

† Lee-Harnett Mental Health Clinic:

+ *Division on Alcoholism,* 106 W. Main St., P. O. Box 2428, Sanford 27330; Tel: 919-755-4129 or 919-755-4130.

MARTIN (See Beaufort)

MECKLENBURG—

* *Charlotte Council on Alcoholism,* 1125 E. Morehead St., Charlotte 28204; Tel: 704-375-5521.

† *Mecklenburg County Mental Health Center,* 316 E. Morehead St., Charlotte 28202; Tel: 704-334-2834.

+ *The Randolph Clinic, Inc.,* 1804 East Fourth St., Charlotte 28204; Tel: 704-333-9026.

MONTGOMERY (See Moore)

MOORE—

* *Moore County Alcoholism Program,* P. O. Box 1098, Southern Pines 28387; Tel: 919-692-6631.

† *Sandhills Mental Health Center* (Hoke, Montgomery, Moore, Richmond):

+ *Alcoholism Services,* Medical Center Building, Pinehurst 28374; Tel: 919-295-6851.

NASH (See Edgecombe)

NEW HANOVER—

* *New Hanover County Council on Alcoholism,* 211 N. Second St., Wilmington 28401; Tel: 919-763-7732.

† *Southeastern Mental Health Center,* 920 S. 17th St., Wilmington 28401; Tel: 919-763-7342.

ORANGE—

† *Alcoholism Clinic of the Psychiatric Out-Patient Service, N. C. Memorial Hospital,* Chapel Hill 27514; Tel: 919-942-4131, Ext. 336.

* *Orange County Council on Alcoholism,* Box 277, Carrboro 27510; Tel: 919-942-1089 or (if no answer) 919-942-1930.

PAMLICO (See Craven)

PASQUOTANK (Camden, Chowan, Dare, Perquimans)—

‡ *Mental Health and Alcoholism Authority*:

+ *Division on Alcoholism,* P. O. Box 645, Medical Bldg., Elizabeth City 27909; Tel: 919-335-1663.

PERQUIMANS (See Pasquotank)

PITT—

† *Coastal Plain Mental Health Center,* 1827 W. Sixth St., Greenville 27834; Tel: 919-752-7151.

+ *Pitt County Alcohol Information and Service Center,* 907 Forbes St., P. O. Box 2371, Greenville 27834; Tel: 919-758-3159.

RICHMOND (See Moore)

ROBESON (Bladen, Columbus, Scotland)—

† *Southeastern Regional Mental Health Center,* Medical Arts Bldg., Lumberton 28358; Tel: 919-739-7601.

ROWAN—

* *Educational Division, Rowan County ABC Board,* P. O. Box 114, Salisbury 28144; Tel: 704-633-1641.

† *Rowan County Mental Health Clinic,* Community Bldg., Main and Council Sts., Salisbury 28144; Tel: 704-633-3616.

SCOTLAND (See Robeson)

TYRRELL (See Beaufort)

VANCE—

† *Vance County Mental Health Clinic,* County Home Rd., Henderson 27536; Tel: 919-492-1176 or 919-438-4813.

* *Vance County Program on Alcoholism,* 158 Bypass W., P. O. Box 1174, Henderson 27536; Tel: 919-438-3274 or 919-483-4702.

WAKE—

† *Mental Health Center of Wake County,* Wake Memorial Hospital, Raleigh 27610; Tel: 919-834-6484.

* *Wake County Health Department,* 3010 New Bern Ave., Raleigh 27610; Tel: 919-833-1655.

WASHINGTON (See Beaufort)

WATAUGA (Alleghany, Avery, Wilkes)—

† *New River Mental Health Center*:

+ *Division on Alcoholism,* 210 W. King St., Boone 28607; Tel: 704-264-8759.

+ *Division on Alcoholism,* 101-A W. Main St., Wilkesboro 28697; Tel: 919-838-3551.

WILSON—

Aftercare Clinic, Encas Rural Station, Wilson 27893; Hours: Mon.-Fri., 8:00 a.m.-5:00 p.m.; Tel: 919-237-2239.

* *Wilson County Council on Alcoholism,* Room 308, 116 S. Goldsboro St., Wilson 27893; Tel: 919-237-0585.

Wilson Mental Health Clinic, Encas Rural Station, Wilson 27893; Tel: 919-237-2239.

WILKES (See Watauga)

EDUCATION AND INFORMATION SERVICES

INVENTORY—quarterly magazine using the techniques of education in presenting facts about alcoholism in popular, illustrated style.

Films—on alcohol facts and personality health for distribution among groups interested in brief, factual motion picture studies. Obtainable from the Film Library, N. C. State Board of Health, Raleigh, N. C. Please request films as far in advance as possible and state second and third choices.

The ARC Brochure—illustrated booklet on North Carolina's program for treating alcoholism as an emotional sickness.

The New Cornerstones—Family manual giving basic facts about alcoholism and suggestions for coping with the personality sickness.

Library Books—Books on alcoholism are available from the North Carolina State Library through local libraries to residents of North Carolina. To obtain any of the books listed in the March-April, 1964 issue of **Inventory,** go to your community library and make the request.

Staff Speakers—members of the Raleigh and A.R.C. staffs are available for speeches before civic and professional groups.

Teacher's Guide—kit containing reference material and pamphlets on alcoholism and mental health. Available to teachers from the Education Division, N. C. Department of Mental Health, Raleigh.

Consultant Service—for establishment of local programs.

These services are free upon request of citizens residing in North Carolina. For free materials in limited quantity, write

Education Division, N. C. Department of Mental Health
P. O. Box 9494
Raleigh, N. C. 27603

Second - Class,
Postage Paid at Raleigh, N. C., 27602.